WHAT IS CLAIMED IS:

1., A method for checking whether a transmission is a multicast transmission or not in an Ethernet passive optical network including an Optical Line Termination (OLT) and multiple Optical Network Units (ONUs) connected to the OLT by generating a multicast logical link ID (LLID) that represents multicast information, from a multicast Medium Access Control (MAC) address in a MAC layer in one of the multiple ONUs or the OLT, so that at least one ONU from among the multiple ONUs or the OLT receives the multicast transmission, the method comprising the steps of:

(a) modifying the multicast MAC address and mapping the modified address to an LLID field in a Regenerator Section (RS) layer below the MAC layer; and

(b) generating mode informationthat represents a multicast transmission, and arranging the mode information in a position adjacent to the LLID field,

wherein, the RS layer checks whether a transmission transmitted to the said at least one ONU selected from among the multiple ONUs or the OLT is a multicast transmission or not.

2. The method according to claim 1, wherein in step (a) the multicast MAC address is modified by using a hash function.

3. The method according to claim 2, wherein the hash function comprises an XOR function that searches for addresses, which are self contained in an existing bridge.

4. The method according to claim 1, wherein the multicast MAC address is modified in step (a) by applying CRC function for a checksum in a MAC layer.

5. 5. The method according to claim 1, wherein the RS layer adds the generated LLID to an address list, which is self contained in order to check whether a transmission is a multicast transmission or not.

6. The method according to claim 1, wherein the multicast MAC address has a 10 size of 48 bits, and 23 bits for a group identifier from among 48 bits of the multicast MAC address are mapped into 14 bits of the LLID field in the RS layer below the MAC layer in step 1.

7. The method as claimed in claim 1, wherein the multicast MAC address has a 15 size of 48 bits, and 48 bits of the multicast MAC address are mapped into 14 bits of a LLID field in the RS layer below the MAC layer in step 1.

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8.   A method for checking whether a transmission is a multicast transmission or not in an Ethernet passive optical network including an Optical Line Termination (OLT) and multiple optical network units (ONUs) connected to the OLT by generating a multicast logical link ID LLID that represents multicast information, from multicast Medium Access

5 Control (MAC) addresses in a MAC layer in one of the multiple ONUs or the OLT, so that at least one ONU from among the multiple ONUs or the OLT receives the multicast transmission, the method comprising the steps of:

(a) increasing a   quantity of bytes of a preamble assigned to the LLID and then inserting a group identifier from among the multicast MAC addresses into an LLID field in

10 a Regenerator Section (RS) layer below the MAC layer; and

(b) generating mode information that represents a multicast transmission, locating the mode information in a position adjacent to the LLID field,

wherein, the RS layer checks whether a transmission transmitted to the ONU or the OLT is a multicast transmission or not.